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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,078	07/31/2003	Kunihiko Sugimoto	15162/06080	2219
24367 7590 01/30/2007 SIDLEY AUSTIN LLP 717 NORTH HARWOOD SUITE 3400 DALLAS, TX 75201			EXAMINER HENN, TIMOTHY J	
			ART UNIT 2622	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/632,078	Applicant(s) SUGIMOTO ET AL.	
	Examiner Timothy J. Henn	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 19 is/are allowed.
- 6) ☒ Claim(s) 9, 11, 12 and 18 is/are rejected.
- 7) ☒ Claim(s) 10 and 13-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/12/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9, 11, 12 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by MacLean (US 6,144,408).

[claim 9]

Regarding claim 9, MacLean discloses an exposure signal processing apparatus comprising: a first sensing controller which accumulates electric charges in accordance with an exposure having a specified exposure time to generate an exposure signal (Figure 3, Items 1a-1c; Figure 4, Items 28, 30 and 38; Figure 5, Item 56); a second sensing controller which accumulates electric charges without exposure for a time substantially equal to the exposure time of the first sensing controller to generate a dark signal (Figure 3, Item 4; Figure 4, Items 28, 30 and 38; Figure 5, Item 50; c. 4, ll. 39-41); a modifier which modifies the dark signal (Figure 3, Items 5, 6, 7a and 8a) and a corrector which corrects the exposure signal based on the modified dark signal (Figure

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3, Item 9).

[claim 11]

Regarding claim 11, MacLean discloses a first sensing controller which executes the accumulation of electric charges owing to an exposure to light from an object and the second sensing controller executes accumulation of electric charges without an exposure to light from an object (e.g. light exposed frames 1a-1c and dark frame 4 in Figure 3).

[claim 12]

Regarding claim 12, MacLean discloses modifying the dark signal in consideration of a noise component (Figure 5).

[claim 18]

Regarding claim 18, MacLean discloses detector for detecting an exposure time (e.g. Figure 4, Items 28, 30 and 38) and a modifier which executes dark signal modification for all values of exposure time. Therefore, the system of MacLean can be considered to modify the signal when the exposure time is larger than a predetermined value as claimed. The examiner notes that since claim 18 does not require modification only when the exposure time is larger than a predetermined value, MacLean meets the limitations as claimed.

Allowable Subject Matter

4. Claims 1-8 and 19 are allowed.

[claims 1-8 and 19]

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Regarding claims 1-8 and 19, the prior art does not teach or fairly suggest an imaging apparatus or method in which an exposed image and a noise image are captured, the noise data is compared to multiple reference values stored in a multiple reference value storage section and a reference value is selected, the noise data is modified in accordance with the selected reference value and the modified noise data is subtracted from the image data. Although storing reference data is known in the art (e.g. Kelly et al., US 2004/0051797), the claimed system of comparing noise data with the reference values and selecting a reference value to modify the noise data is not taught or suggested.

5. Claims 10, 13-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

[claim 10]

Regarding claim 10, the prior art does not teach or fairly suggest accumulating dark image data immediately after a first exposure for accumulation of image data and modifying the dark image data as claimed. While it is known in the art to capture dark image data after the capture of exposed image data, correcting the dark image data captured immediately after the exposed image data and correcting the exposed image data based on modified dark image data is not taught or suggested.

[claims 13-17]

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Regarding claims 13-17, the prior art does not teach or fairly suggest selecting a modification reference value from a plurality of modification reference values stored in a reference value storage section as claimed. Although storing reference data is known in the art (e.g. Kelly et al., US 2004/0051797), the claimed system of comparing noise data with the reference values and selecting a reference value to modify the noise data is not taught or suggested.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

i.	Koren et al.	US 6,831,686
ii.	Baer	US 6,714,241
iii.	Corum et al.	US 6,101,287
iv.	Sudo et al.	US 5,272,536
v.	Nagai et al.	JP 07-236093

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

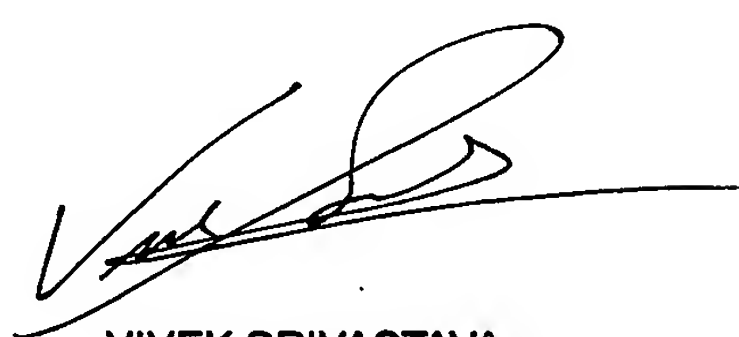
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJH
11/11/2006



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600